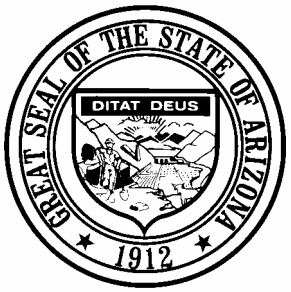


OFFICE OF THE ATTORNEY GENERAL
STATE OF ARIZONA

GASOLINE REPORT

ANTITRUST UNIT
MAY 18, 2004

EXECUTIVE SUMMARY

Daily news reports confirm what we all know. Gasoline prices have skyrocketed in the last four months (the third such spike within the last 16 months) and Arizona consumers are paying some of the highest retail gasoline prices in the country. Disgruntled consumers are demanding explanations. Since the gasoline price spike in spring 2003, the Arizona Attorney General's Office ("AGO") has been analyzing Arizona's gasoline market, investigating potential antitrust violations, reaching out to consumers and industry, and working with state and federal agencies in an effort to find the causes of Arizona's extraordinarily high gas prices.

This report summarizes the AGO's findings on market or other conditions contributing to Arizona's high gasoline prices and sets forth recommendations for averting or handling future spikes or supply emergencies.

The AGO has found:

- Arizona's total dependence upon imported gasoline results in higher than average retail prices;
- When the gasoline supply is tight, Phoenix area prices increase faster and higher than the state and national average;
- Arizona's Cleaner Burning Gasoline ("CBG") blend, credited with improving Phoenix air quality, is produced by a limited number of suppliers and may increase production costs and retail prices, but does not appear to be the sole cause for the seasonal price increases;
- Reduction in U.S. refining capacity and gasoline producers' inventory management practices cause tight supplies and result in higher retail prices;
- Despite skyrocketing gasoline prices, consumer demand for gasoline has not lessened.

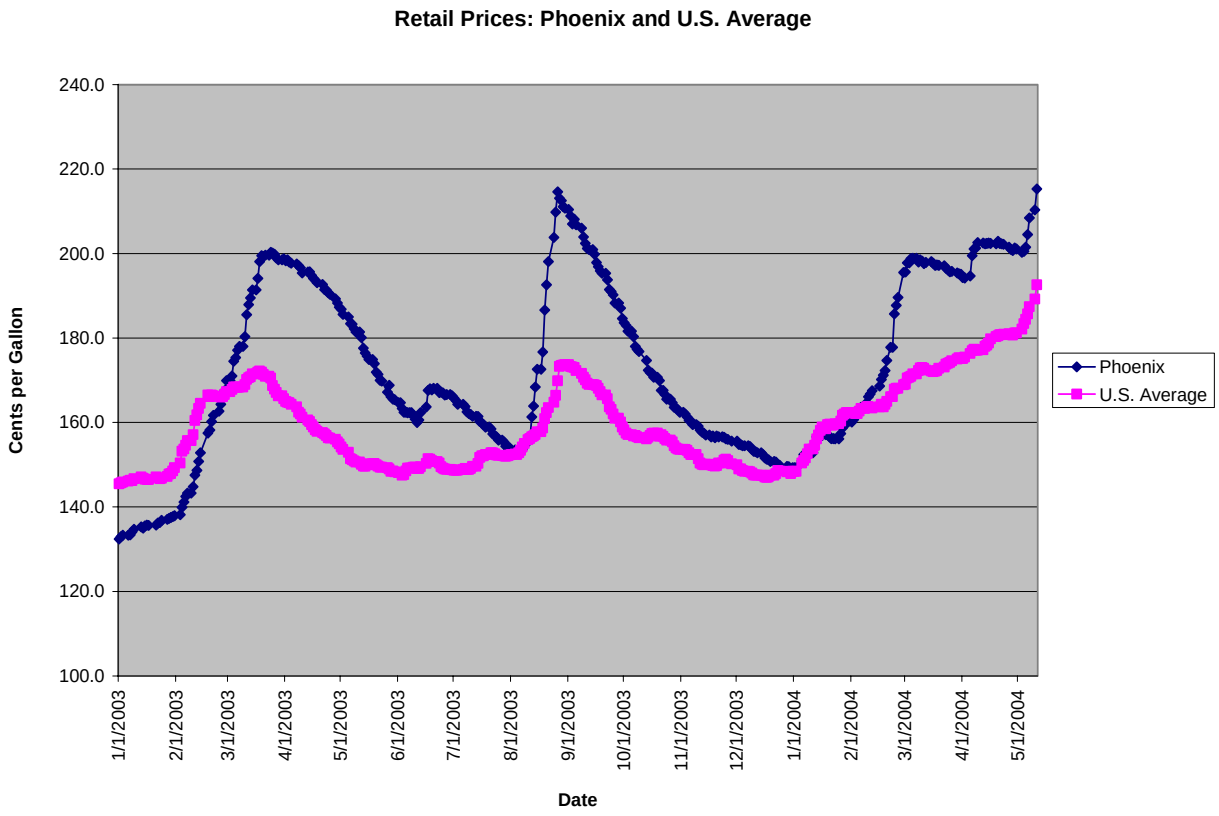
The AGO recommends pursuing the following courses of action to counter rapidly rising gasoline prices:

- Harmonizing the required blends of gasoline among the Western States to increase competition among refineries producing cleaner burning fuel;
- Coordination among the states and federal government to address supply issues;
- Enacting pro-consumer legislation designed to protect consumers during supply shortages, such as anti-gouging legislation;
- Providing incentives for manufacturers and consumers for producing and purchasing fuel efficient vehicles;
- Encouraging construction of additional refineries and pipelines to produce and ship more gasoline to Arizona and the other Western States;
- Conservation.

THE PROBLEM

Volatility has characterized Arizona gasoline retail prices over the past 16 months. As a result, Arizona consumers have paid some of the highest retail gasoline prices in the country during this period. The Phoenix area, especially, has been subject to three notable periods of rapidly escalating prices during this time period. Graph 1a shows two episodes of price spikes in March and August 2003. Each of these periods is evidenced by rapidly escalating prices, followed by gradual decline. The graph also shows the rising trend during the first months of 2004, with prices once again exceeding the $2.00 per gallon level.

GRAPH 1a



Source: AAA

Spring 2003 Price Spike

The first price spike of 2003 occurred between February and April 2003, with average Phoenix retail gasoline prices peaking on March 25, 2003 at $2.00 per gallon for regular unleaded gasoline. Reasons commonly cited for the spring 2003 price spike include: (1) seasonal transition from the winter blend of Cleaner Burning Gas ("CBG") to the summer blend of CBG;[1] (2) initiation of the Iraqi war; (3) Organization of Petroleum

[1] The Phoenix area CBG winter blend, which is used in the Phoenix area from November 1 through March 31, contains 10 percent ethanol at 9.0 Reid Vapor Pressure ("RVP"), while the summer blend,

Exporting Countries ("OPEC") production cutbacks; (4) production problems in Nigeria and Venezuela.

Pipeline Closure Spike

The second price episode occurred from mid-August to early September 2003. This spike was the result of a pipeline break and temporary shutdown of the pipeline supplying gasoline to Phoenix from Texas via Tucson. While the pipeline operator, Kinder Morgan Energy Partners, LP ("KMP") made public announcements indicating the Phoenix area had sufficient supplies of gasoline to accommodate normal consumer demand, public awareness of the pipeline closure created panic buying among consumers, which stressed supply inventories. As a result, several gas stations in the Phoenix area reported they were out of gasoline.

The pipeline event caused Phoenix area gasoline prices to skyrocket. Over an approximate three-week period, beginning August 8 and ending August 26, 2003, the average price in Phoenix jumped by 60 cents per gallon (39 percent), peaking at $2.15 on August 26. In late July, prior to the pipeline closure, the average retail price in Phoenix was at or around the national average of $1.53 per gallon. After the pipeline break, the AGO received more than 1,000 reports from consumers alleging high prices, some as high as $5 per gallon, and instances of gasoline retailers making the purchase of other products or services, such as a car wash, a necessary condition for purchasing gasoline ("bundling"). While the AGO was able to substantiate record-breaking wholesale and retail gasoline prices (some retail prices as high as $5.00 per gallon regular, unleaded), it was unable to substantiate the bundling of gasoline with other products or services. Since there is no anti-gouging law currently in Arizona, the AGO was unable to formally investigate the high gasoline pricing for alleged "gouging" violations.

Graphs 1b, 1c, and 1d show retail price comparisons for Tucson, Flagstaff and Yuma. Each graph compares retail gasoline prices for each city with Phoenix and the national average. The differences in prices reflect: 1) different production costs related to the different blends of gasoline sold in each market; 2) transportation costs to deliver gasoline to Flagstaff and Yuma service stations; and 3) demand and supply conditions in each market.

Graph 1b shows retail prices for Phoenix, Tucson and the national average. While prices in Tucson moved in similar fashion to those in Phoenix during the pipeline outage, Tucson prices peaked at $1.83 per gallon on August 28, 2003 – 32 cents below the Phoenix peak of $2.15, which occurred two days earlier. The average price in Tucson was nine cents higher than the national average at peak on August 26. Tucson receives its gasoline supply from Gulf refineries, delivered over the KMP east pipeline to the Tucson terminal. In addition to generally lower production costs realized at Gulf refineries, Tucson's summer CBG blend differs from the Phoenix blend, and Tucson's

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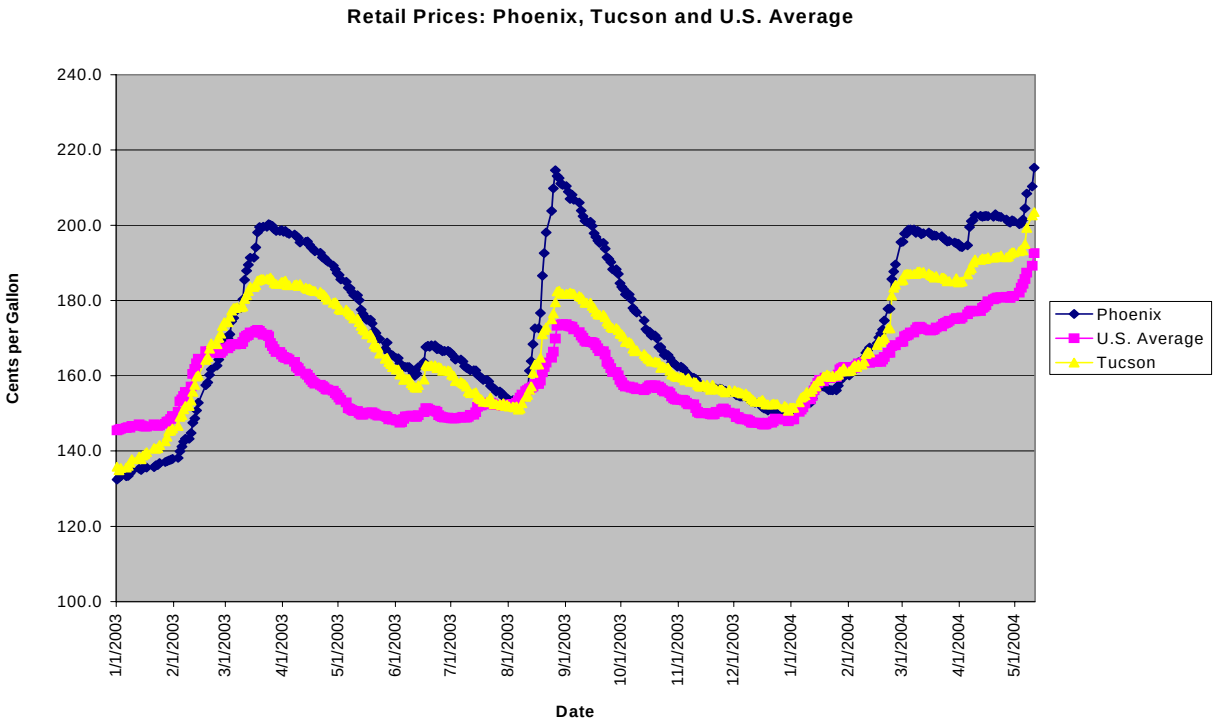
used from April 1 through October 31, uses the oxygenate Methyl Tertiary Butyl Ether ("MTBE") or no oxygenate at 7.0 RVP. During the summer, the Tucson area uses conventional gasoline, but from October 1 through March 31, Tucson must add 5.7 percent ethanol to the conventional gasoline.

gasoline prices are generally lower than those in Phoenix. During the 2003 summer pipeline break, Tucson prices increased since the Tucson gasoline market was competing with Phoenix for gasoline supply. The tightened supply condition resulted in higher prices in Tucson and other communities throughout the state.

As shown in Graph 1c, immediately prior to the pipeline break, prices in Flagstaff were about 10 cents higher than those in Phoenix. Although Flagstaff is not required to use CBG, conventional gasoline must be transported from Phoenix to Flagstaff via tanker trucks. The additional transportation costs add several cents to the price of gasoline sold in Flagstaff. Additionally, Flagstaff prices tend to rise during the summer months as demand for gasoline increases due to increased tourism and highway travel. However, by August 18, 2003, Flagstaff prices were lower than Phoenix. When the average price in Phoenix reached $2.15 per gallon, the average price in Flagstaff was $1.92 per gallon -- 23 cents lower. The spike in Flagstaff prices during this period was the result of tightened supply conditions in Phoenix due to the pipeline break.

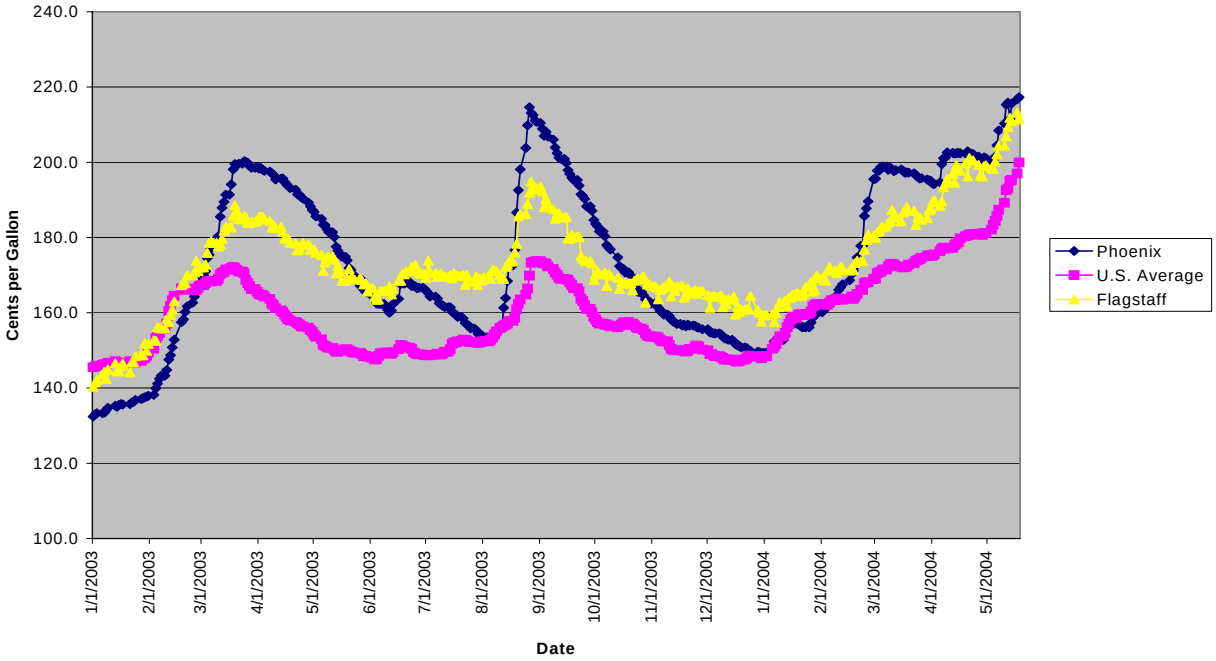
Prices in Yuma are shown in Graph 1d. During 2003 and early 2004, Yuma prices generally tracked those in Phoenix, except the seasonal transition periods, when Yuma's prices are lower than Phoenix prices. Like Flagstaff, Yuma is not required to sell CBG. Yuma's supply of conventional gasoline is delivered via tanker trucks from the Los Angeles area. During the 2003 pipeline closure, gasoline prices in Yuma increased together with those in Phoenix, but peaked at about 20 cents below the Phoenix peak. Yuma, like Tucson and Flagstaff, competed with Phoenix for gasoline supplies during the pipeline closure, thereby placing upward pressure on retail gasoline prices.

GRAPH 1b



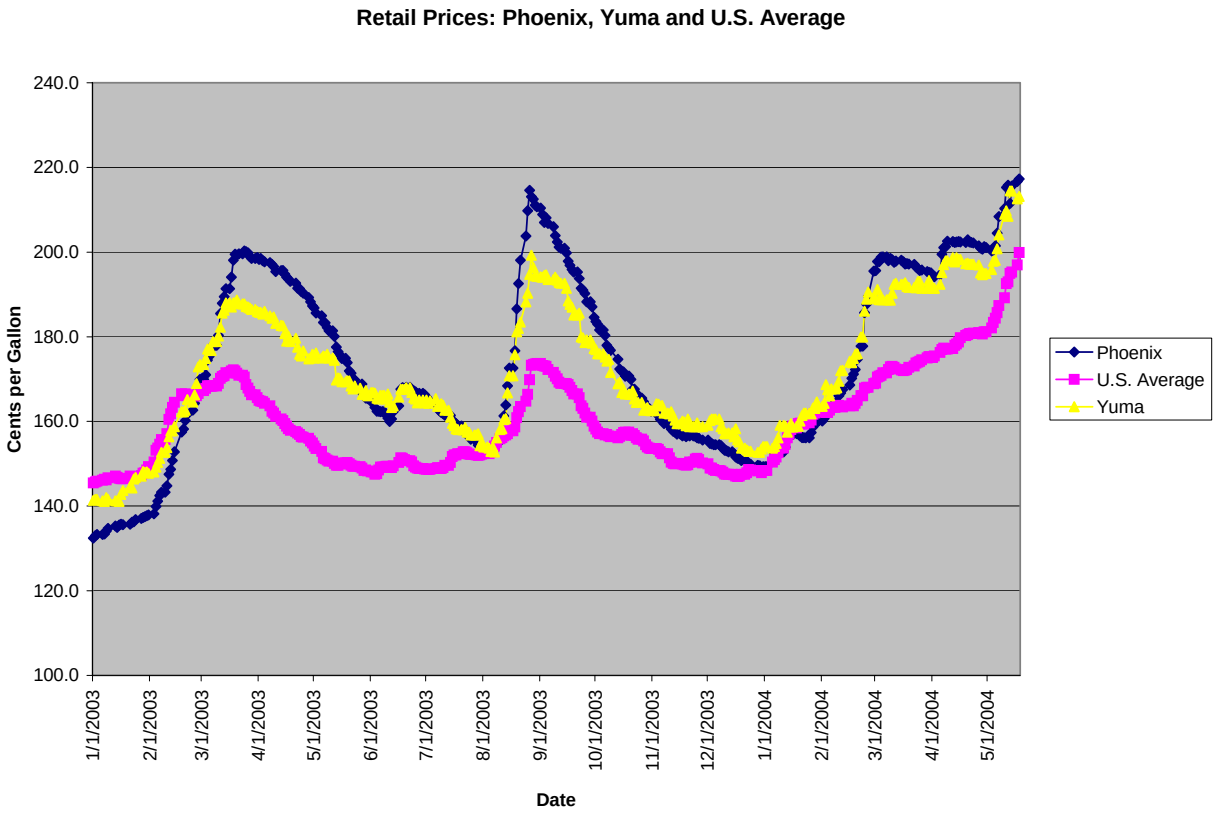
Source: AAA

GRAPH 1c



Source: AAA

GRAPH1d



Source: AAA

Spring 2004 Price Increase

Following restoration of gasoline flows through the Tucson-to-Phoenix pipeline, prices began a slow, but consistent decline until the first part of 2004. However, between January 1 and May 18, 2004, gasoline prices in the Phoenix area have increased an average of 69 cents per gallon. As of May 18, 2004, the average price in the Phoenix area was $2.18 per gallon, a new record. In March, the Phoenix price began to depart dramatically from the national average, just as in March 2003. The reasons cited by industry experts for the run up of gasoline prices during 2004 are: (1) increasing prices for crude oil; (2) diminished inventories of finished gasoline; (3) announced reduction of crude production quotas by OPEC nations; (4) the seasonal switch to summer blend gasoline; (5) concerns about future terrorist attacks on oil supplies; and (6) steady or increased consumer demand for petroleum products.

Spikes Create Consumer Outrage

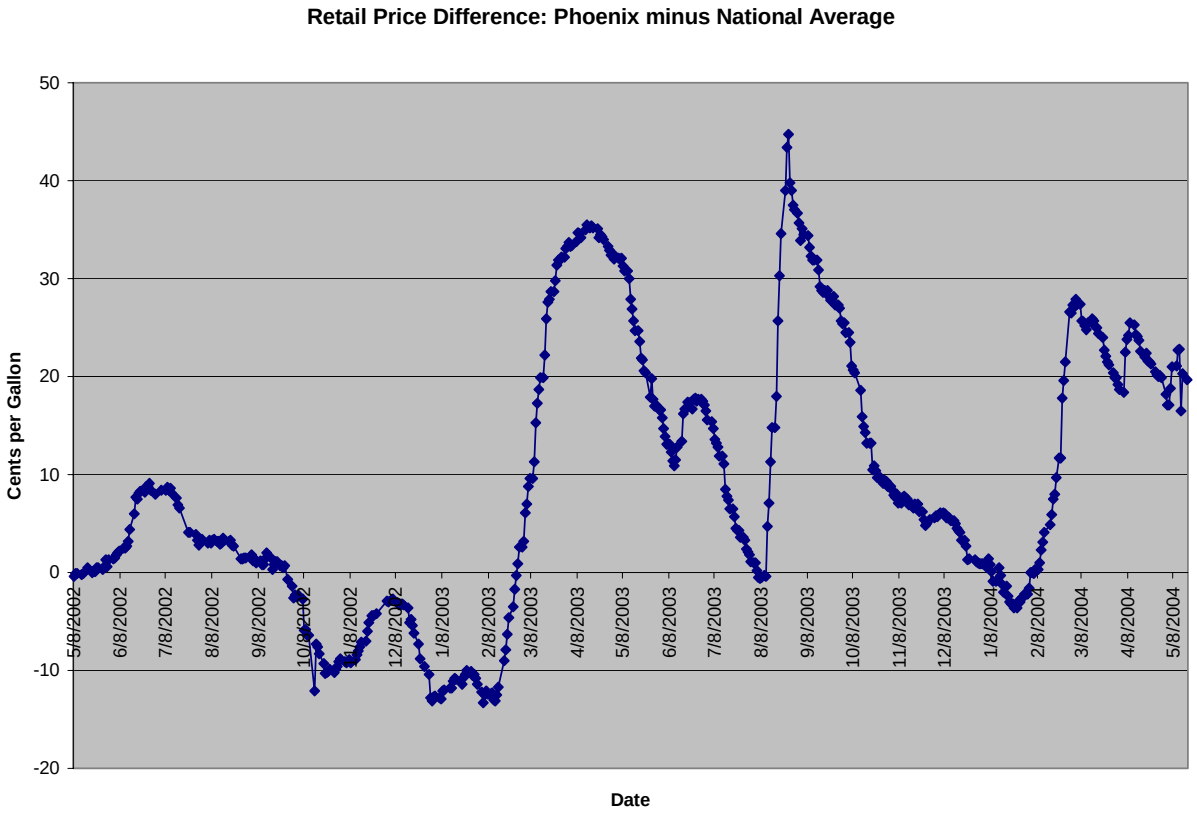
Consumers have had strong reactions to the price spikes. Since the August 2003 spike, the AGO has received more than 1,300 telephone calls, letters and e-mails from Arizonans expressing their displeasure with high gasoline prices. In response, the AGO

has taken a number of steps to address the Arizona retail gasoline pricing situation including, but not limited to: analyzing the gasoline market and investigating potential industry antitrust violations; reaching out to consumers and industry; supporting legislation to protect Arizona consumers during a supply emergency; working with other state and federal agencies in an effort to find the causes of and alleviate Arizona's extraordinarily high gas prices; inviting other western states Attorneys General to convene a regional task force; and calling on the federal government for a joint federal-state task force to investigate high gasoline prices and refining and blending practices in the western states.

GASOLINE PRICES IN ARIZONA DIVERGE FROM NATIONAL AVERAGE PRICE

Arizona was not the only state in the nation to experience price spikes during the 16 month period beginning in January 2003. Arizona price spikes tend to follow trends in nationwide prices but the magnitude of the Phoenix price increases is significantly greater than the national average. Graph 2 compares Phoenix prices with the national average price for the period, showing the difference between Phoenix prices and the national average price. As shown in Graph 2, the spring 2003 price peak in Phoenix exceeded the national average by about 30 cents per gallon. Similarly, during the August peak, Phoenix prices exceeded the national average price by about 38 cents per gallon. At the time of this writing, May 18, 2004, the Phoenix average price of a gallon of gasoline is $2.18, 18 cents higher than the national average of $2.00. The average price for a gallon of gasoline in Tucson is $2.06, only 6 cents higher than the national average. In Flagstaff and Yuma the average prices are $2.11 and $2.13 respectively (AAA, May 18, 2004).

GRAPH 2



Source: AAA; calculated from Graph 1a

As shown in Graph 2 above, Phoenix prices spike at levels significantly greater than the national average price when prices rise, but approximate the national average price when prices decline. The remainder of this analysis considers those factors that influence pricing fluctuations in the Arizona market.

GASOLINE SUPPLY AND INVENTORIES

Retail gasoline prices are determined by many factors including supply and demand, regulatory compliance and supply disruptions.

Market Structure

The petroleum and petroleum products industry ("the industry") is vertically integrated. That means that the major petroleum companies are engaged in all aspects of gasoline production, including oil exploration, production, refining, distribution and retailing. The industry is also oligopolistic, meaning that relatively few companies compete with each other. Moreover, the industry has become more concentrated in the last twenty years. (Parker, 2000).

Because there are relatively few major oil companies, it may appear to the average consumer that because the oil companies all raise prices at or around the same time,

they are fixing prices. In a recent antitrust lawsuit filed in California against 9 petroleum companies for fixing prices, the California Supreme Court explained that parallel pricing conduct alone, without proof of collusion, is not illegal:

> In an oligopoly . . . interdependence is altogether consistent with independence, and is not necessarily indicative of collusion. 'In a market served by' a few 'large firms,' like the market for CARB gasoline served by the petroleum companies, 'each firm must know that if it reduces its price and increases its sales at the expense of its rivals, they will notice the sales loss, identify the cause, and probably respond. In short, each firm is aware of its impact upon the others. Though each may independently decide upon its own course of action, any rational decision must take into account the anticipated reaction of the other[s]. . . . Because of their mutual awareness, their decisions may be interdependent although arrived at independently.' (6 Areeda, Antitrust Law, *supra*, ¶ 1429a p. 175.) In such a market, like that here, prices may move generally upward across all of the firms more or less together rising quickly and falling slowly, and may do so interdependently but nevertheless independently. For collusion, there must be more than interdependence.

Aguilar v. Atlantic Richfield Co., et al., 25 Cal.4th 828 (2001).

In Phoenix and other areas of the country, the retail segment of the industry has become increasingly concentrated as independent retailers have exited the market. Anecdotal information received by the AGO from Arizona gasoline retailers provides insight into the reasons behind the exodus of independent retailers from the market. In May 2003, in response to consumer complaints generated from the first price spike and in an attempt to assess the competitiveness of Arizona retail gasoline markets, the AGO's Antitrust Unit ("ATU") mailed surveys to every gasoline retail station in Arizona. Independent retailers and franchisees who responded to the survey expressed a high level of frustration with current market conditions.

Despite the fact that the major oil companies were realizing huge profits in 2003,[2] independent station owners and franchisees claimed their profit margins were extremely low—too low to operate a profitable business. Citing overbearing control by the major gasoline suppliers, such as zone pricing (charging different wholesale prices within a city), price squeezes (charging independent retailers and franchisees a wholesale rate which is the same or slightly higher than company owned, company operated stations' posted retail prices), and exorbitant rent increases, the survey respondents alleged that major oil companies were forcing independents and franchisees out of the market so that company owned, company operated stores would be all that remained.

[2] Exxon Mobil was reported to be the most profitable corporation in America in 2004, with Chevron Texaco coming in at number 13 and Conoco Phillips coming in at number 20. CNNMoney Report "Fortune's most profitable: Oil, money and drug companies dominate the top of the biggest earnings list" at www.money.cnn.com/2004/03/23/news/fortune500/profitable_list/.

While these allegations corroborate the AGO's findings in 1998 (when it last issued a report on the Arizona gasoline market) of increased market concentration and decreased competition, no overt antitrust violations were found either in 1998 or at present. Absent proof of collusion or the exercise of market power, no successful antitrust case can be brought. The retailers' and franchisees' claims, however, warrant further examination.

Reduction of Refinery Capacity

Excess refining capacity in the 1980s and 1990s had been blamed by the industry for reducing profitability. Therefore, in the mid 1990s oil companies began eliminating excess refining capacity by divesting or decommissioning smaller refineries (Peterson and Mahnovski, 2003).

No new refineries have been built in the United States since 1976 (Carroll, 2004), and older and smaller refineries are closing down. According to the U.S. Department of Energy, Energy Information Administration ("EIA"), between 1982 and 2002, the number of refineries in the United States declined from 263 to 159 (www.eia.doe.gov/emeu/finance/mergers/refcap_tab2.html). Accompanying the loss of 104 refineries is the loss of refinery production capacity of over 441,000 barrels per calendar day.

Consolidation in the oil industry over the last twenty years has especially affected the refining segment. The number of firms engaged in refining in the United States decreased from 189 in 1981 to 58 in 2002 (Peterson and Mahnovski, 2003).

While overall refining capacity has been reduced, the effect on production has been somewhat mitigated by computerization and improvement of downstream processing capacity at remaining refineries. Also, according to EIA, foreign imports of finished gasoline product have begun to replace domestic refining, with the volume of imported product in the U.S. exceeding domestic product, beginning in 1996 (www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/petroleum_issues_trends_1996/CHAPTER5.PDF).

Another potential blow to refining capacity was delivered by Shell Oil Company last November when it announced it will discontinue refining operations at its Bakersfield Refinery by October 1, 2004, citing the decline of availability of San Joaquin Crude as the principal reason for closure (Shell Oil Company, November 13, 2004). Some in the refining industry dispute Shell's rationale for closure, citing improved oil extraction technology. The Bakersfield Refinery has a capacity to process 66,000 barrels of crude per day, comprising 2 percent of the gasoline and 6 percent of the diesel for the California market (California Energy Commission, 2003). The AGO is currently examining this refinery closure to determine its effect on Arizona gasoline supply and prices.

Gasoline Supply

In addition to high market concentration, issues related to Arizona's distance from and limited access to gasoline supplies create additional pressures on Arizona prices. Arizona does not produce any finished gasoline products and must import almost its entire supply through two pipelines owned and operated by Kinder Morgan (KMP). The state's isolation from production centers and dependency on gasoline imports tend to exacerbate market tightness during times of supply interruptions.

The KMP east pipeline transports gasoline and fuel products from KMP's terminal in El Paso, Texas. This supply pipeline has the capacity to supply 60,000 barrels (2.5 million gallons) of gasoline and fuel products per day into the Phoenix area from Texas via Tucson (KMP, August 12, 2003). KMP ships approximately 30 percent of the Phoenix supply over this pipeline. The remaining 70 percent of the Phoenix supply is shipped via the KMP west pipeline from Southern California to Phoenix (KMP, August 11, 2003). These percentages fluctuate on any given day.

KMP is presently engaged in a construction program to expand the Tucson-to-Phoenix pipeline from an alternating eight and twelve-inch pipe to uniform twelve inch pipe, with completion anticipated in 2006. This project was in the permitting phase at the time of the pipeline temporary closure during summer 2003.

The KMP west pipeline supplies gasoline and fuel products from Los Angeles to the company's terminal facilities located in Phoenix. At the time of the east pipeline's temporary shutdown in August 2003, KMP was supplying about 121,000 barrels (5 million gallons) of fuel product to the Phoenix area over the west pipeline. This volume was subsequently increased to 148,000 barrels (6.2 million gallons) per day to offset transport volume lost from the east pipeline (KMP, August 21, 2003).

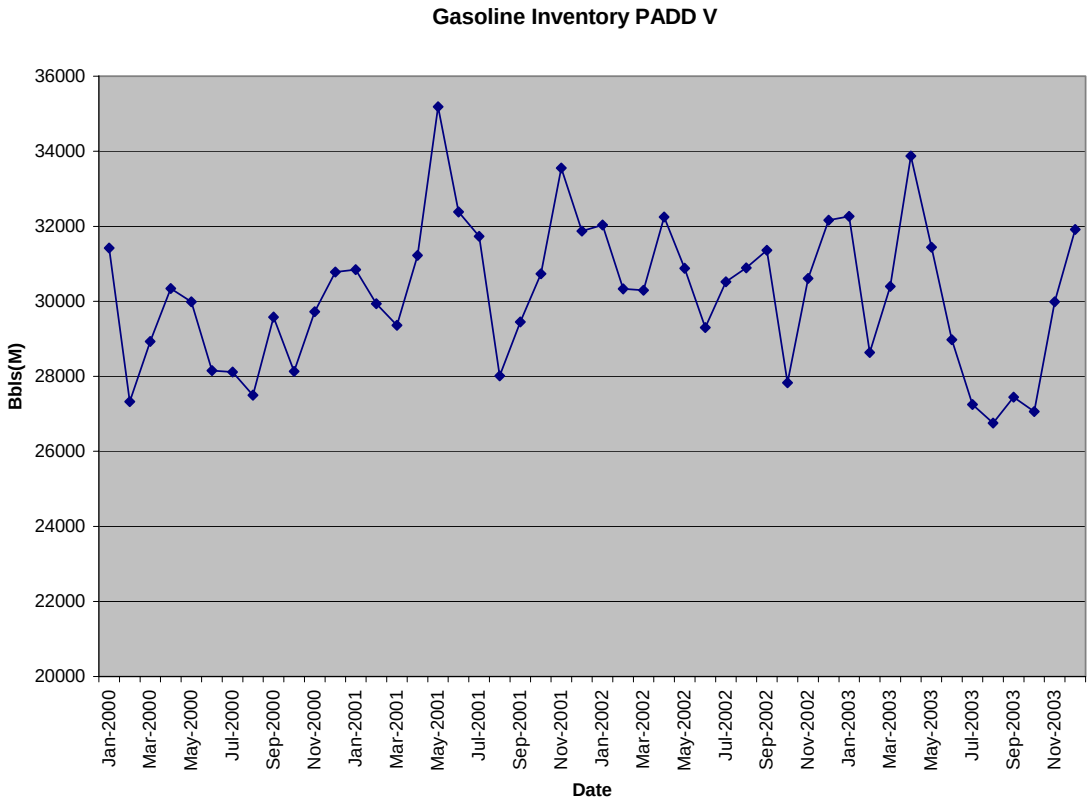
The West's gasoline supply is tighter and thus more vulnerable to price spikes and product shortages than other areas of the country for several reasons. One of the main reasons is that the region has relatively few refineries, 32 compared to 127 elsewhere in the country (EIA, www.eia.doe.gov/neic/rankings/refineries.htm), and a limited number of pipelines bringing refined product from non-regional refineries. Other factors contributing to the West's vulnerability include rapid population growth in places like Phoenix, Las Vegas, and in Central and Southern California, geographic isolation from alternative suppliers, and specialized fuel blends, which deter alternative suppliers from refining gasoline for the Western states. (Peterson and Mahnovski, 2003).

Management of Gasoline Inventories

Overall gasoline supply has not kept pace with increased demand. This results in tight gasoline markets with upward pressure on prices. During times of short supply, gasoline inventories at storage facilities are drawn down (reduced) from normal levels and prices tend to increase.

Graph 3 shows gasoline product stocks within the Petroleum Administration for Defense Districts ("PADD") V region, where Arizona is located. While the average gasoline product inventory is about 30,000 thousand barrels, the level fluctuates considerably throughout the time period. The tightness in the supply-demand balance is evidenced in the movement and levels of stocks, including stocks in the Phoenix and Tucson terminals. Additionally, while demand among PADD V states, including Arizona, has experienced strong growth, inventory levels, on average, have not increased. This means that price spikes can be especially severe during periods of low or restricted supply, since fixed inventories must now accommodate increased levels of demand in the market.

GRAPH 3



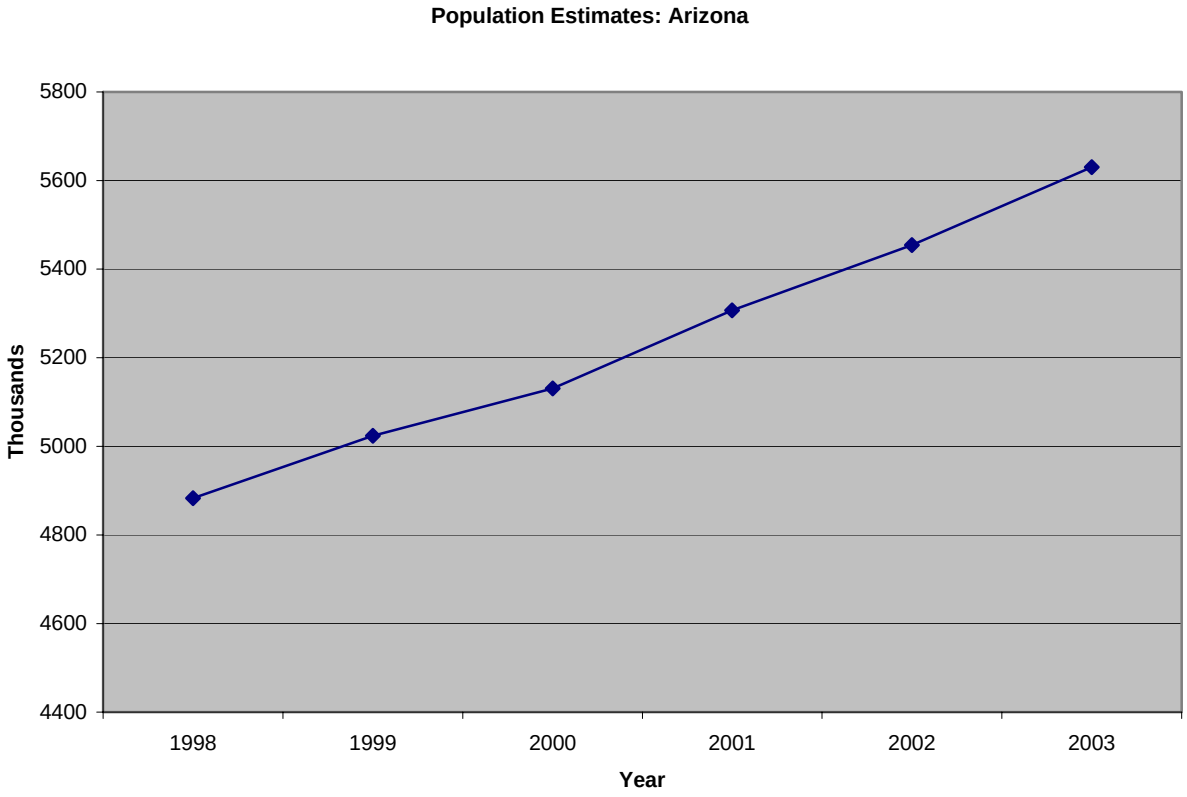
Source: EIA

Demand for Gasoline

In Arizona, demand for gasoline is outpacing supply, in large part due to the State's population growth. To illustrate, Graphs 4a and 4b show growth in Arizona population and gasoline sales. As shown in Graph 4a, Arizona's population has grown a total of 15 percent between 1998 and 2003, or about 2.89 percent annually. Similarly, Graph 4b shows that Arizona gasoline sales have increased by a total of 12.3 percent during the five year period, 1998-2003, or about 2.3 percent per year. Regional gasoline product stocks, on the other hand (Graph 3) have increased on average less than two percent

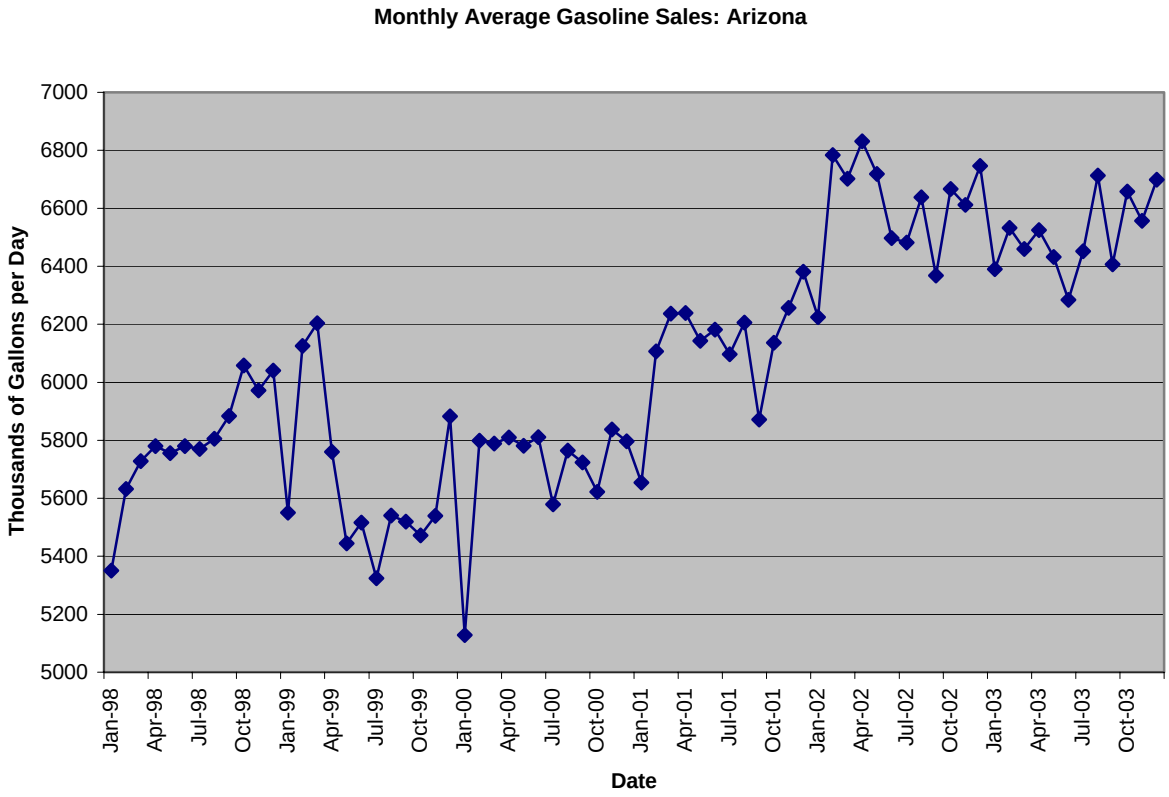
between January 2000 and December 2003, an average of less than one-half of a percent annually.

GRAPH 4a



Source: Arizona Department of Economic Security

GRAPH 4b



Source: EIA

Inventory Management, Profit Maximization and Prices

Petroleum companies seek to manage inventories of crude oil and finished products in ways to minimize costs. This means, among other things, keeping inventories at levels just sufficient to accommodate normal demand, yet minimize storage requirements. According to the EIA, storage costs are two dollars per barrel for owned storage capacity and six dollars per barrel for leased storage. This equates to an additional one cent added to the price of gasoline (EIA, www.eia.doe.gov/pub/oil_gas/petroleum/features_articles/2003/gasolinepass/gasolinepass.htm).

Industry inventory management practices produce an added profit dimension for the gasoline producers. In addition to minimizing storage costs, keeping inventories at the lowest possible level can result in market tightness (no excess supply), leading to higher retail prices. The oil suppliers justify this reduced inventory as a profit maximization technique whereby they reduce storage costs. Nevertheless, by avoiding any “extra” supply in the system, oil companies realize higher margins from the higher prices.

An additional factor affecting inventories is seasonal changes in gasoline blends to meet environmental requirements. The result of decreased inventory is often drastically increased prices to consumers since the increasingly tight supply leads to extreme price spikes with any supply disruption.

In Phoenix, supplies become tightest during seasonal CBG transition periods, as producers draw down the blend stocks to make room for the next formulation. For this vertically integrated, highly concentrated, oligopolistic (characterized by few competitors) industry, there is little incentive to increase inventory or inventory capacity during times of increased or increasing demand, because the tightness of supply produces higher profits for the industry. This practice also leaves consumers especially vulnerable to high prices when unexpected supply interruptions occur because there are no significant reserves.

In response to repeated supply shortages and resultant price spikes due to the petroleum industry's delivery and inventory strategy, some states are exploring state-owned gasoline reserves. These reserves may be helpful during a crisis, but quite costly to maintain.

In Arizona, Caljet is currently constructing several large gasoline storage facilities at the Phoenix pipeline terminal storage facilities ("tank farm"). This extra storage capacity should increase Phoenix inventories and help avert or minimize a supply shortage in the event of another pipeline shutdown.

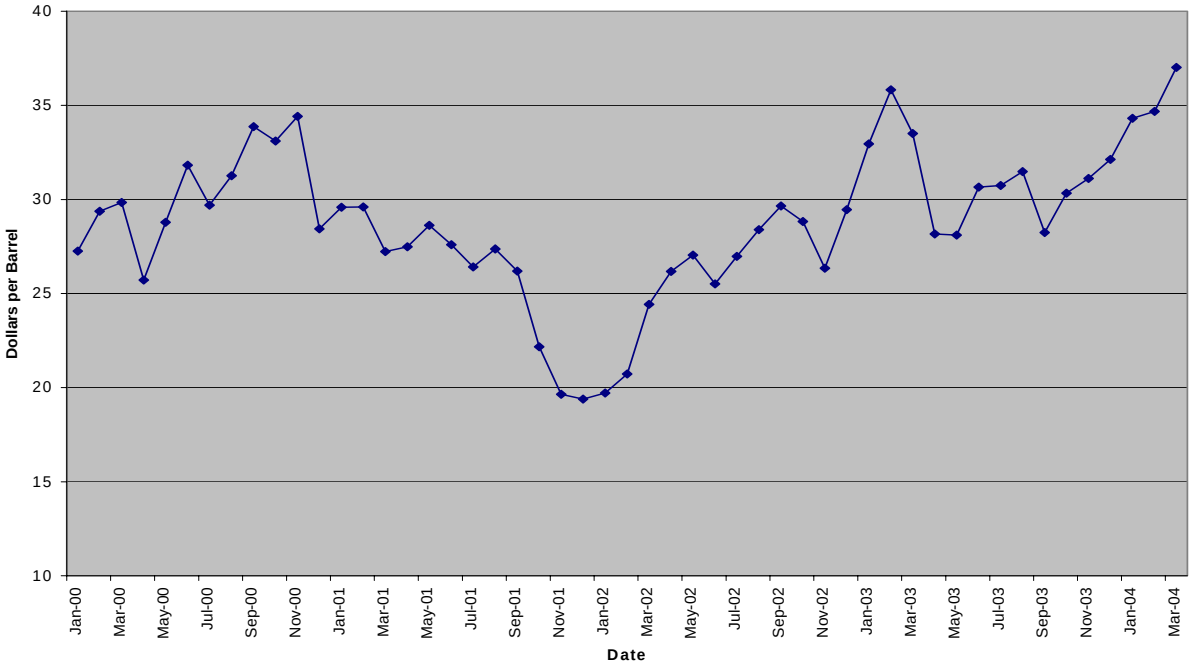
OTHER FACTORS AFFECTING RETAIL PRICES

The Price of Crude Oil

The price of crude oil makes up between 40 and 50 percent of the price of a gallon of regular, unleaded gasoline (California Energy Commission, www.energy.ca.gov/gasoline/margins/index.html). When the price of crude oil increases, price increases in the retail price of gasoline usually follow. In California (where gasoline prices approximate Phoenix prices, except for local taxes) it is estimated the increase in crude oil prices between January 5, 2004 and May 5, 2004 added approximately 12 cents to the price of a gallon of gasoline (California Energy Commission, www.energy.ca.gov/gasoline/margins/index.html). The increase in crude oil prices, moreover, contributed approximately 20 percent of the increase in gasoline prices during this period.

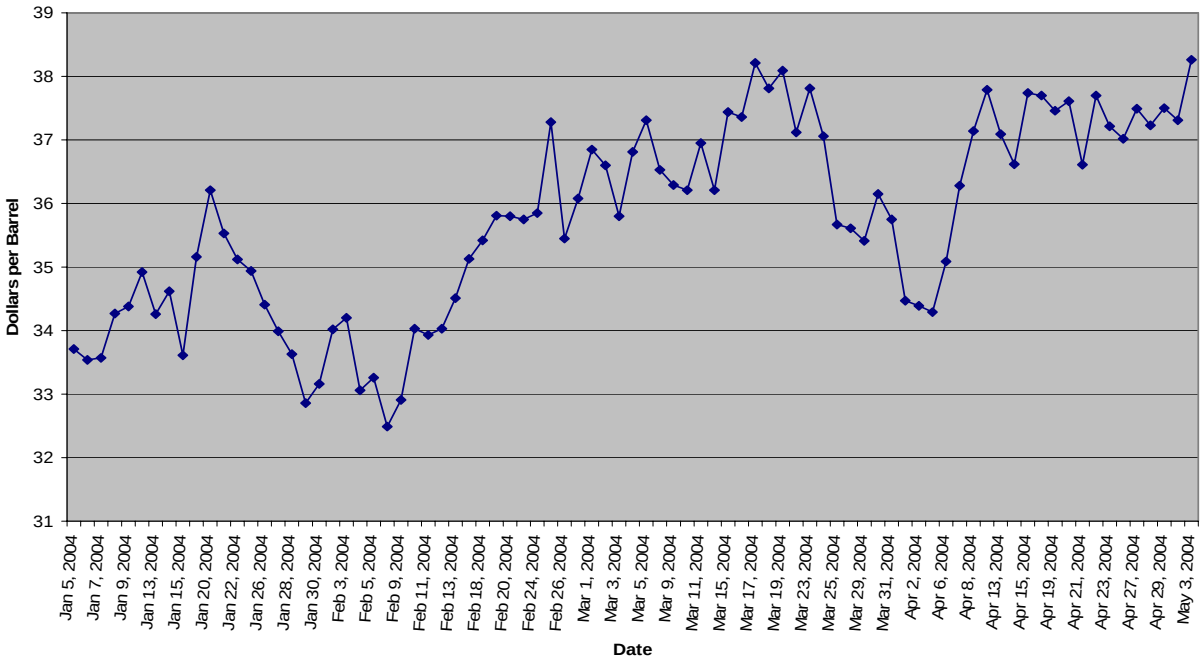
Graphs 5a and 5b show the monthly average and daily average spot price of West Texas Intermediate crude oil. As shown in Graph 5a, the price of crude oil spiked during March 2003, following the initiation of the Iraqi war. Crude spot prices gradually declined until May 2003, when they began to rise. Although prices quickly spike, their decline is much more gradual. In the November 2003 time period, crude prices began a steady upward march, reaching over $40 per barrel during May 2004.

GRAPH 5a



Source: EIA

GRAPH 5b



Source: EIA

Graph 5b shows the daily spot price for West Texas Intermediate crude oil between January 5, 2004 and May 5, 2004. As shown in Graph 5b during this four month period, the spot price of crude oil increased from $33.71 per barrel to $38.26, representing a 13 percent increase. Since Arizona receives product from Texas, gasoline prices in the state will be affected by such increases. Crude oil comprises between 40 and 50 percent of the price of gasoline (California Energy Commission, www.energy.ca.gov/gasoline/margins/index.html). It is estimated the increase in crude oil prices between January 5, 2004 and May 5, 2004 added approximately 12 cents to the price of a gallon of gasoline (California Energy Commission, www.energy.ca.gov/gasoline/margins/index.html). The increase in crude oil prices, moreover, contributed approximately 20 percent of the increase in gasoline prices during this period.

The current spot price for crude oil is above $40 per barrel. It has not reached this level since the First Gulf War in 1990, when spot prices also reached $40 per barrel for a short period. Although the recently announced OPEC cutbacks of one million barrels per day (4 percent) were scheduled to begin April 1, 2004, crude production of OPEC countries presently exceeds quotas already in place. Additionally, according to the EIA, "[I]n the four weeks between February 27 and March 26 (effectively the month of March), crude oil inventories have increased by 18.5 million barrels, compared to a more typical increase of 14.8 million barrels" (EIA, March 31, 2004).

In the past, OPEC countries have not always adhered to OPEC production quotas. A recent Wall Street Journal article noted, "[t]he International Energy Agency. . . estimates that the 10 producers adhering to OPEC's quota system pumped. . . more than a million barrels more [in February, 2004] than the cartel's current ceiling" (Bahree, 2004). The current high price of crude oil has been cited as an important incentive for quota cheating among OPEC producers (Bahree, 2004). Analysts speculate that although OPEC quotas will be reduced, ". . . member states are unlikely to reduce their actual output unless prices fall sharply from current levels" (Bahree, 2004). It is also possible that the current high price of oil could act as an incentive for non-OPEC oil producing countries to increase supplies of crude.

Whether the recently announced OPEC production cutbacks will lead to further increases in the world price of crude oil and, hence, increases in the price of gasoline in Arizona and elsewhere in the nation remains uncertain.

Although crude inventories in the U.S. are currently at high levels, gasoline inventories during the first few months of 2004 have been running below expected seasonal levels (EIA, March 17, 2004). According to the EIA, "[o]ver the last four weeks, about 14.6 million barrels per day of crude oil have been run through U.S. refineries, significantly less than the 15.0 million barrels per day expected for March" (EIA, March 31, 2004). The availability of crude is not the issue, according to ConocoPhillips' Chief Executive Officer, James Mulva. Speaking with reporters in early May 2004, Mr. Mulva stated "There is plenty of oil on world markets. It's a question of limited refining capacity" (Efstathiou, 2004).

With diminished gasoline inventories and continued high demand for gasoline, prices have increased. Whether the industry adjusts inventories and other supply conditions to manipulate price warrants further investigation.

Phoenix Cleaner Burning Gasoline

Following the U.S. Environmental Protection Agency's classification of the Phoenix Metropolitan area as "serious non-attainment" with National Ambient Air Quality Standards, the Arizona Legislature adopted the Arizona Cleaner Burning Gasoline ("CBG") program in 1997. The CBG program has been modified with more stringent standards in 1999 and 2000. The program requires that a specific reformulated blend of gasoline, meeting Arizona's technical specifications, be produced at the refinery. In the winter, ethanol is added to the CBG at the Phoenix terminal. In the summer, Phoenix's CBG blend either arrives at the terminal with the MTBE already added by the refineries or it is "clear product" that does not contain any oxygenate. At each stage of production and transport, the Arizona Department of Weights and Measures performs quality audits to ensure the gasoline meets Arizona's CBG requirements.

Arizona's CBG program controls gasoline fuel content for the following items: Reid Vapor Pressure (to lessen evaporative hydrocarbons); oxygen content (to reduce emissions including carbon monoxide); sulfur content (to reduce sulfur dioxide and sulfates); benzene content (to reduce toxic emissions); olefin content (smog reduction); distillation temperature (to enhance fuel economy); and aromatic hydrocarbons (smog reduction).

Since its introduction in 1997, Arizona's CBG program has contributed to improved air quality. According to the Arizona Department of Commerce, ". . . scientific evidence seems to show that Arizona CBG is the third most effective pollution control program, after federal tailpipe standards. . . and vehicle emissions inspections programs" (Arizona Department of Commerce, 2003).

However, the CBG program may add to the price of gasoline at the pumps in three ways. First, Arizona's specific blends of reformulated gasoline are produced at refineries specifically for Arizona, meeting Arizona's unique blend specifications. At the present time, only a limited number of refineries produce Arizona CBG. Should any of the refineries producing Arizona CBG be forced into an unplanned outage, supplies of Arizona CBG could be disrupted, leading to market tightness and the potential for higher gasoline prices.

Second, the manufacture of Arizona CBG may add costs to gasoline production. These costs include the refinery costs for producing Arizona reformulated gasoline, and costs for any oxygenates. The Arizona Department of Commerce, referencing a 1996 report by Mathpro, Inc., titled "Assessment of Fuel Formulations Options for Maricopa County" indicates the additional costs of CBG are between 9 and 17 cents per gallon above conventional gasoline (Arizona Department of Commerce, 2003). Examination of rack wholesale price data for clear gasoline and CBG during the period January 2003 to May 2004 for Phoenix indicates the cost of producing CBG vary from the low end of about 5

cents per gallon to the high end of 26 cents per gallon (Oil Price Information Service, Graph 6).

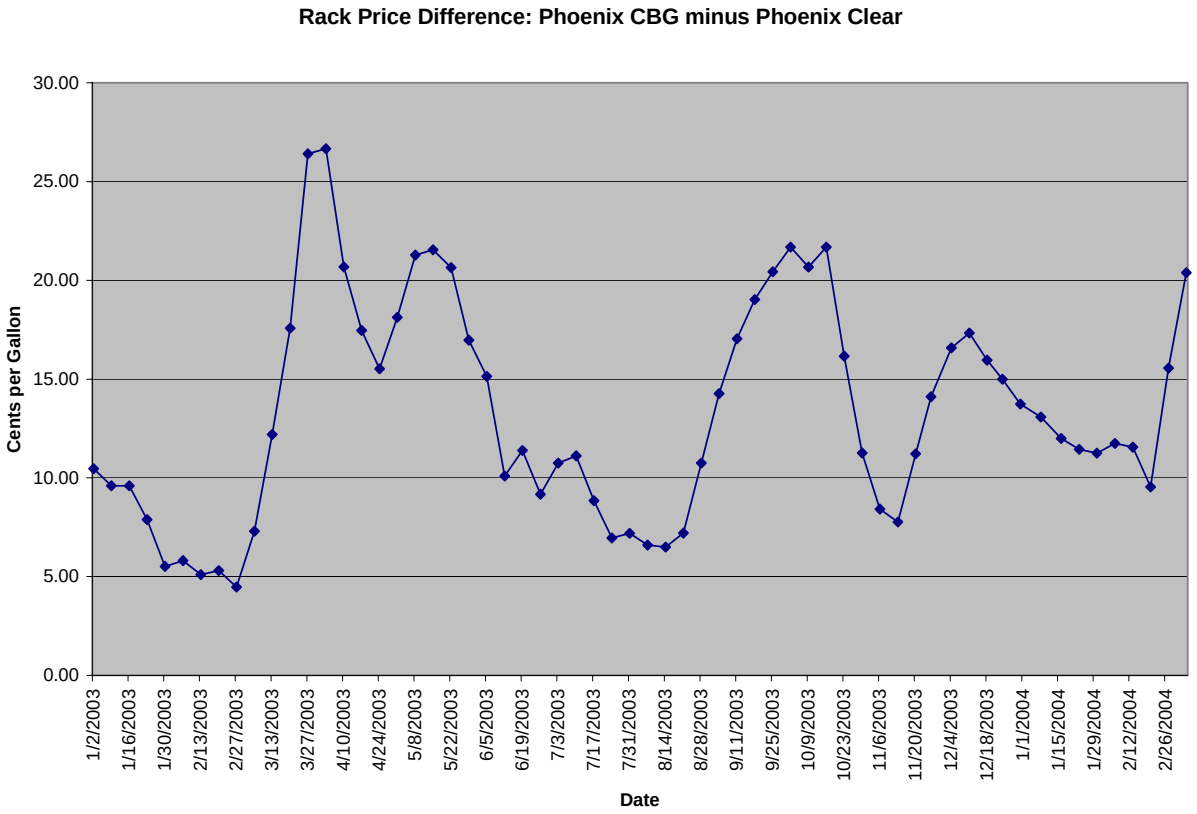
With the recent phase-out of the oxygenate additive MTBE (a potential water contaminant and suspected carcinogen) in Arizona and California, the price of CBG may slightly increase since MTBE tends to be a little less expensive than gasoline, makes up 15 percent volume of a gallon of gasoline, and has either a neutral or positive affect on miles per gallon ("mpg"). In the summer of 2004, those supplying CBG to Arizona voluntarily agreed to use MTBE only for premium, not for regular CBG, citing liability concerns. The regular CBG for summer 2004 is thus a "clear blend," meaning there are no oxygenates added, but due to other reformulated gasoline specifications (including aromatics and sulfur content, distillation value and RVP) this product continues to comply with EPA Clean Air regulations. In May, 2004, Governor Napolitano signed House Bill 2142 into law, officially banning MTBE in Arizona effective January 1, 2005.

When ethanol is used as an oxygenate, such as in the Tucson and Phoenix winter time blends, there may be a cost increase due to: 1) fluctuations in the price of ethanol, which tends to be higher than MTBE, 2) ethanol comprising a smaller percentage of the volume of a gallon of gasoline than does MTBE, and 3) ethanol's lower fuel efficiency as compared with gasoline or MTBE. All of these factors ultimately cause an increase in the demand for gasoline, potentially causing increased prices.

Third, during seasonal transitional periods, terminals must draw down supplies of the previous seasonal blend to make room for the next season's blend because the differing blends of reformulated gasoline cannot be mixed together. As gasoline suppliers empty terminal tanks during these transitional periods, supplies are tightened, placing upward pressure on gasoline prices.

Graph 6 shows the wholesale price differential between Phoenix CBG and conventional gas shipped to Phoenix. This difference represents the wholesale markup related to supplying CBG in the Phoenix market. It reflects additional costs and profit associated with producing CBG, supply changes due to inventory reductions during transitional periods, as well as any changes in refinery output. Additionally, the data includes taxes. While the state excise tax and one-cent underground storage tax are the same for conventional and CBG, the federal excise tax component is five cents less for the Phoenix winter ethanol blend of CBG than the summer MTBE blend.

GRAPH 6



Source: Oil Price Information Service (OPIS)

Graph 6 shows the wholesale rack price difference between Phoenix CBG and clear gasoline shipped to Phoenix for the period January 2003 to March 2004. This difference represents the wholesale markup related to supplying CBG in the Phoenix market. It reflects the additional costs and profits associated with producing CBG as well as existing supply and demand conditions for CBG.

Graph 6 shows several peaks and troughs, where the wholesale price difference between Phoenix CBG and conventional gasoline increases and recedes. Generally, peaks occur at or near the mandatory, seasonal switchover of gasoline blends in April and November. At these switchover dates (April 1 and November 1) the demand for seasonal, oxygenated CBG increases relative to conventional gasoline. Another way to state this is the demand for non-seasonal gasoline declines as the switchover date approaches since retail stations are required to sell only the specific, seasonal gasoline blend.

During 2003 and 2004, peak price differences were reached on April 3, 2003 (26.67 cents) and October 16, 2003 (21.68 cents). Additionally, beginning in February 2004 and extending into March 2004, the price difference increased, reaching 20.39 cents on March 5, 2004. During the months of February and March, when suppliers are reducing inventories of the winter blend gasoline to switchover to the summer blend on April 1,

prices spike. Similarly, during the September – October period, suppliers are reducing summer blend inventories to make room for winter blend. It is during these transition periods, when one CBG blend is being drawn down to make room for the next season's stock that the price differential between conventional gasoline and CBG tends to be greatest.

THE ATTORNEY GENERAL RESPONDS TO HIGH GAS PRICES

Beyond the statutory duties to collect and analyze wholesale and retail pricing data, the Attorney General has taken the following actions:

In response to the first 2003 price spike:

1) In May 2003, ATU issued a retail gasoline station survey to all gasoline stations in the State to better understand competition levels and market conditions, including supply issues. ATU analyzed hundreds of responses for general marketing and distribution trends and learned that the independent retailers are being forced out of the market.

2) Processed more than four hundred consumer complaints about prices, with many consumers alleging "price gouging," and investigated those complaints that alleged or indicated antitrust or consumer fraud violations. Because gasoline pricing is not regulated, and Arizona has no law to prevent high prices, even during an emergency, the only action the AGO could take was to investigate alleged antitrust behaviors, such as price fixing or monopolization, or for consumer fraud. No evidence of illegal activity was uncovered related to the spring 2003 price increases.

3) Researched the feasibility of and called for an anti-gouging law to protect consumers during a supply emergency. Such a law would limit price increases only during a declared supply emergency for the good or service in short supply.

4) In May 2003, the ATU briefed State legislators on the need for anti-gouging legislation as part of a joint presentation with the Energy Office on the gasoline market, economics and applicable law.

5) Contacted and met with representatives from major oil companies, consumer groups, such as AAA, and trade associations, such as the Southwest Automotive Trades Alliance.

6) Joined State and federal agencies and working groups focused on gasoline issues including:

    a) the Governor's Gasoline Working Group as an active member, coordinating with other State agencies on gasoline policy issues;

b) the Federal Trade Commission's (FTC) Gasoline Price Monitoring Project, whereby the ATU regularly supplies the FTC with pricing data from consumer complaints.

7) Began collaborating with the EIA, sharing information and working with EIA's economists.

8) To improve consumer outreach, developed a gasoline section within the AGO Web site (www.ag.state.az.us). The gasoline section provides information about the Arizona gasoline market, including pricing information, and links to other federal and state governmental agencies and consumer groups that provide additional information about gasoline markets and prices. The AGO also created an on-line gasoline comment form for consumers. The form was designed to provide greater access to consumers, allowing them to fill out and submit the form online at their convenience. The AGO has received over 450 online submissions from consumers. Every submission is reviewed, recorded, referred for investigation where appropriate, and sent to the FTC for the Gasoline Price Monitoring Project.

9) Worked with the Governor's Gasoline Working Group to compile a list of frequently asked questions ("FAQs") and answers for the public. The FAQs were completed during the summer of 2003 and were linked into the AGO Web site.

After the August 2003 price spike, resulting from the pipeline break, the AGO took the following action:

1) Received and responded to more than 1,000 consumer complaints, including approximately 600 telephonic complaints and 200 online complaints.

2) Reviewed, documented and, where appropriate, investigated consumer complaints alleging extreme pricing and bundling the sale of gasoline to the purchase of another product offered by the gasoline station such as a car wash. While the AGO was able to substantiate record-breaking wholesale and retail gasoline prices (some retail prices reached approximately $5 per gallon), it was unable to substantiate any bundling of products or services to the purchase of gasoline (such as requiring consumers to purchase a carwash with their gasoline). Even had the AGO been able to substantiate the alleged tying of products and/or services, it is unlikely that such practices would have been illegal pursuant to Arizona and federal antitrust law.

3) In response to apparent anomalies in the gasoline supply to Phoenix, the Attorney General launched an investigation into potential supply manipulation. Most details of this investigation remain confidential

pursuant to Arizona Revised Statutes § 44-1406, but KMP expressly permitted the Attorney General to disclose that the ATU had served KMP with a Civil Investigative Demand ("CID"), and that KMP complied with the demand. KMP was not the target of the investigation but received the CID because it is a repository of information regarding gasoline supply in Arizona. Results of this investigation are inconclusive at this time and may warrant further review.

4) Researched all consumer protection laws with anti-gouging - type language and found that twenty-three states, Washington D.C., and one territory ("states") have some form of consumer protection from excessive pricing or profiteering. The ATU contacted all of the states' Attorney General Offices to determine whether these anti-gouging provisions had been enforced, whether the laws appeared to be effective, and whether the attorneys enforcing the laws had any suggestions for improvement. The most common recommendation was to include a clearly defined limit on price increases (such as 10 percent) during a supply emergency.

5) Proposed the following concept language for an Arizona anti-gouging statute, to be in effect during a supply emergency:

   a) Limited Duration: Only in effect during a "Supply Emergency," as declared by the Executive for a maximum of seven days (renewable), only for product(s) or service(s) specified by the Governor, and only in the area where there is a supply emergency;

   b) Prohibit excessive pricing (more than 10 percent increase) after the Supply Emergency has been declared, based on an individual business's average price over the previous 30 days;

   c) Allow for increased pricing when: a) passing along increased wholesale prices; b) passing along increased costs due to emergency; c) net profits increased less than 10 percent from profits before supply emergency was declared (that is, if profits before emergency were 15 percent, after emergency profits cannot exceed 25 percent). Thus, if a price increase is because business person is just covering fixed costs, this is not a violation;

   d) Prohibit "hoarding": interfering with or withholding product(s) or service(s) from sale or delivery (if those product(s)/service(s) are covered by the Supply Emergency);

   e) Prohibit "tying": forcing consumers to buy another product(s) or service(s) in order to buy the product(s) or service(s) that is in short supply (e.g., consumers cannot be forced to buy car wash before they can buy gas);

6) Worked closely with the Governor's Gasoline Working Group and all of the other state and federal agencies (with whom the AGO had established close working relationships during the spring 2003 gasoline price spikes) to gather information and coordinate approaches to managing the gasoline supply and pricing situation.

7) Attended various meetings with government and industry stakeholders to problem-solve issues such as distribution of gasoline in areas with shortages, management of gasoline tanker trucks and drivers' hours limitations, and security issues. As a result of these meetings, the Governor requested (from federal authorities) and was granted a temporary waiver in August-September 2003 to allow the Phoenix area to use conventional gasoline rather than CBG, and a temporary extension of truckers' hours from 70 to 80 per week maximum. These temporary fixes, intended to quickly bring more gasoline into the Phoenix area during the shortage, could not have happened without the close collaboration among the various state and federal agencies involved.

8) In November 2003, the AGO surveyed gasoline retailers, requesting information about the August shortage and its effects on retailers. Results from this survey were inconsistent. Some retailers reported that they had been losing money before the shortages, but recouped some profits during or just after the shortages due to the increased prices. Others stated that the lack of consistent gasoline supplies had been detrimental to their profits. No clear picture of the effects of the shortages on retailers' profits could be discerned from these responses. Without firm evidence of illegal market behaviors, no antitrust claim could be established.

In response to this latest price spike, which began in February 2004, in which Phoenix area consumers have been paying at least 23 cents more per gallon than consumers elsewhere in the nation, Attorney General Goddard has:

1) Called on the Department of Energy's Secretary, Spencer Abraham, for a joint federal-state task force to examine the gasoline markets in the western states and work towards a solution to ensure a stable, economical gasoline supply to Arizona and her surrounding states.

2) Contacted western states' Attorneys General inviting them to join him in calling for Secretary Abraham to convene a joint federal-state task force. Thus far, Alaska, California, Hawaii, Washington, and Nevada have all responded that they support the Attorney General's initiative.

CONCLUSIONS

The following conclusions are drawn from our analysis of Arizona's gasoline market:

1) Arizona's gasoline market is isolated from major refinery centers and is wholly dependent upon imports from California and the Gulf states. This makes Arizona retail prices highly sensitive to both planned and unplanned supply disruptions.

2) During times of tight supply, gasoline prices in Phoenix increase faster and higher than the national average. When supply conditions ease, Phoenix prices gradually decline to the national average or slightly lower.

3) Cleaner Burning Gasoline (CBG) manufactured for Arizona is made up of unique blends, which can only be produced in a limited number of refineries.

4) Reformulated gasoline has improved air quality in the Phoenix and Tucson areas, but may impose additional costs, which could increase the price of gasoline. These additional costs may result from several factors, including supply conditions. The estimated costs of CBG vary, ranging from zero to thirty cents per gallon. The cost differential appears to reflect the cost of refining reformulated gasoline, adding any required oxygenates, existing supply and demand conditions, and profits.

5) Gasoline producers' inventory practices create market tightness, which can lead to higher retail prices.

6) Gasoline prices in Phoenix have increased during the transition periods to seasonal blend gasoline in each of the past two years.

7) Reduction of U.S. refining capacity has resulted in supply pressures. In recent weeks, the amount of crude input to refineries has been lower than expected. Coupled with strong demand, lower supplies of gasoline have led to higher prices at the pump.

8) Reduction of refinery capacity has increased tightness in gasoline supplies, making most markets, including Arizona, susceptible to high retail gasoline prices.

9) The demand for gasoline continues to increase.

10) Lack of adequate public transportation acts as a disincentive for the public to reduce gasoline demand.

RECOMMENDATIONS

1) Analyze the possibility of conforming Arizona's CBG to California's blend. Since most of Arizona's CBG comes from California, conforming the blends might increase efficiency and the number of competitive sources from which Arizona gasoline suppliers could purchase CBG.

2) Continued coordination at the state level and increased coordination between the states and federal government. In February 2004, Attorney General Goddard called on the federal government to create a joint federal-state task force to examine the gasoline markets in the western states. Several western states' Attorneys General expressed their support of such a measure. A summit meeting with the EPA, Department of Energy and western states would provide an excellent forum in which the west's regional gasoline problems and possible solutions could be discussed. Additional meetings with representatives of the western states might also produce coordinated approaches to the unique problems facing them.

3) Legislation. While the State cannot regulate gasoline prices, it can eliminate the incentive to create emergency shortages in an attempt to raise prices and maximize profits. That is why the Attorney General supports anti-gouging legislation to protect Arizona consumers during a supply emergency. While two such bills were introduced in the 2004 session (HB2567 and SB1112), it appears as though neither will succeed this session. Attorney General Goddard remains committed to pursuing this legislation next session.

   The anti-gouging legislation supported by the Attorney General strikes a delicate balance between effectively protecting consumers and being fair to businesses. For this reason, there are clear limits in the price and profit increases permitted during a supply emergency, but there is a "cushion" of 10 percent permitted price increase (many states do not allow for ANY increase in prices during an emergency). Also, if a business can demonstrate that although its prices rose more than 10 percent, its net profits did not increase more than 10 percent, due to its fixed costs or increased expenditures due to the disaster, there is no violation. Yet, the proposed legislation contains no defense for forcing consumers to purchase extraneous products or services before they can buy the item in short supply.

   It is important to note that although anti-gouging legislation would protect consumers in a supply emergency, it would not come into play at any other time.

   The Attorney General also supports legislation requiring gasoline suppliers to provide government agencies with supply data, which would generally remain confidential.

4) Providing incentives, such as tax breaks, for producing and purchasing fuel efficient vehicles including hybrid automobiles which use gasoline and electricity to power the vehicle. The federal clean-fuel vehicle incentive, which is a tax credit for hybrid vehicles, will be phased out by 2006. (www.fueleconomy.gov/feg/tax_afv.shtml)

5) Encouraging the expansion of the gasoline pipeline system bringing gasoline into Arizona. Besides KMP, there are a few other pipeline companies interested in building new petroleum pipelines in Arizona, including Longhorn Pipeline (www.longhornpipeline.com). The competition and diversity of supply from another petroleum pipeline in Arizona would likely benefit Arizona consumers, both from a supply and pricing perspective. Also, having redundancy in Arizona's supply system could help prevent another August, 2003-type gasoline shortage.

6) Determining the feasibility of constructing an oil refinery in Arizona. A group called Arizona Clean Fuels ("ACF") has raised the issue of building a refinery in Arizona (www.arizonacleanfuels.com). Initially, ACF proposed building the refinery near Mobile, Arizona. However, environmental concerns arose and recently ACF has suggested a location near Yuma, Arizona. Logistical issues, including the source of crude for the refinery and a pipeline to bring the crude to Arizona, financial feasibility, environmental concerns and permitting issues must be resolved.

7) Determining how to increase in-state storage capacity for gasoline, either by regulation or by making the State a market participant in gasoline storage.

8) Conservation. The price of gasoline is based largely on the laws of supply and demand. As discussed in the Market Section of this report, Arizona's demand for gasoline is greatly outpacing its supply. And even though gas prices have risen by more than 60 cents per gallon since the beginning of the year, the increased prices have done little to curb consumer demand. As reported by the *Arizona Republic,* EIA stated that gasoline demand increased by four percent over last year for the four weeks that ended April 2, 2004 (Jarman and Leonard, April 2004). Reducing demand should alleviate some of the upward pressure on supply and reduce prices in the long run. Again, improved mass transit is an essential element in reducing consumer demand for petroleum products.

REFERENCES

Arizona Attorney General's Office. (1998). *Attorney General's report on competition in Arizona's gasoline prices*. January 1998.

Arizona Department of Commerce. (2003). *Frequently asked questions about gasoline*. From www.commerce.state.az.us/energy/gasfaq.asp, March 26, 2004

Arizona Department of Economic Security. (2004). *Arizona workforce informer: population estimates*. From www.workforce.az.gov/

Arizona Department of Weights and Measures. *What is the CBG program*. From www.weights.az.gov/Business/CBG percent20Main.htm

Automobile Association of America. *Daily fuel gauge report*. From www.fuelgaugereport.com/

Bahree, B. (March 2004). *OPEC is unlikely to cut output unless prices decline sharply*. Wall Street Journal, March 31, 2004.

California Energy Commission. *Transportation fuels, gasoline, diesel, ethanol*. From www.energy.ca.gov/gasoline/index.html

California Energy Commission (2003). *California's oil refineries*. Retrieved March 26, 2004 from www.energy.ca.gov/oil/refineries.html

Carroll, J. (2004). "Refineries struggle to meet demand", *Bloomberg News*, May 11, 2004.

Efstathiou, J. (2004). "Gasoline surges under Bush following refinery mergers", *Bloomberg News*, May 17, 2004.

Jarman, M. and Leonard, C. (April 2004). "Gas prices slow businesses, but drivers motor on," *Arizona Republic*, April 13, 2004.

Kinder Morgan Energy Partners, (2003). *Kinder Morgan Energy Partners to increase gasoline deliveries to Phoenix this weekend*. August, 21, 2003.

Kinder Morgan Energy Partners, (2003). *Media advisory #2*. August 12, 2003.

Oil Price Information Service (2003, 2004). "Rack wholesale prices: Phoenix". Special weekly data reports prepared for the Attorney General's Office, 2003-2004.

Parker, R. (2000) "Solutions to Competitive Problems in the Oil Industry" presented by Richard G. Parker, Dir. of the Bureau of Competition before the Committee on the Judiciary, United States House of Representatives, March 29, 2000.

Peterson, D. and Mahnovski, S. (2003). “New forces at work in refining: Industry views of critical business and operations trends”, Rand Corporation. Retrieved May 17, 2004 from www.rand.org/publications/MR/MR1707/

Shell Oil Company (2003). *Shell to close Bakersfield refinery: optimize regional refining network*. Press release dated November 13, 2003.

U.S. Department of Energy, Energy Information Administration (March 31, 2004). *This week in petroleum.* From tonto.eia.doe.gov/oog/info/twip/twip.asp

U.S. Department of Energy, Energy Information Administration, (March 17, 2004). *This week in petroleum”.* From tonto.eia.doe.gov/oog/info/twip/twip.asp

U.S. Department of Energy, Energy Information Administration (2003). *Stocks: Costs and Profits*”. From www.eia.doe.gov/pub/oil_gas/petroleum/feature_articles/2003/gasolinepass/gasolinepass.htm

U.S. Department of Energy, Energy Information Administration (n.d.). *Gasoline and fuel update*. From tonto.eia.doe.gov/oog/info/gdu/gasdiesel.asp

U.S. Department of Energy, Energy Information Administration (various dates). *Weekly petroleum status report*”. From www.eia.doe.gov/oil_gas/petroleum/data_publications/weekly_petroleum_status_report/wpsr.html

U.S. Department of Energy, Energy Information Administration (n.d.). *U.S. refineries operable atmospheric crude oil distillation capacity as of January 1, 2003.* Retrieved May 18, 2004 from www.eia.doe.gov/neic/rankings/refineries.htm

U.S. Department of Energy, Energy Information Administration (n.d). *Prime supplier sales in Arizona*. From www.eia.doe.gov/emeu/states/oilsales_trans/oilsales_trans_az.html

U.S. Department of Energy, Energy Information Administration (n.d.). “U.S. refining capacity: 1982 and 2002”. From www.eia.doe.gov/emeu/finance/mergers/refcap_tab2.html

U.S. Department of Energy, Energy Information Administration (1996). “Petroleum Stocks: Causes and Effects of Lower Inventories”, *Petroleum 1996: Issues and Trends.* From www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/petroleum_issues_trends_1996/CHAPTER5.PDF

U.S. Environmental Protection Agency, (January 2004). *EPA approves changes to Arizona’s cleaner burning gasoline program*. Environmental News, January 26, 2004.

U.S. Environmental Protection Agency, (October 2001). *Study of boutique fuels and issues relating to transition from winter to summer gasoline*. Staff White Paper. Office of Transportation and Air Quality, October 24, 2001.